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ABSTRACT

This case study presents information on the actual cost of teachers' producing their own learning and instructional materials. The figures reflect the various elements that go into materials development and would need to be considered for similar undertakings. Descriptions of and average costs are given for 10 material development activities: (1) research and pre-writing; (2) writing; (3) course design; (4) secretarial and administrative tasks; (5) layout and typesetting; (6) pilot testing; (7) proofing; (8) print and production; (9) miscellaneous; and (10) training. In addition, unforeseen costs that were absorbed or not charged are listed. The sums listed reflect the cost of developing approximately 60-80 hours of student learning material. Recommendations are given on points to be considered when the decision to develop materials is made. (JD)

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COSTING LEARNING MATERIALS

A HYPOTHETICAL CASE STUDY

OU : 302

NIGEL PAINE

JULY 1983

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Introduction

This case study draws upon some of the work undertaken by the Open Learning Project at SCET. Since its inception, the Project has been closely involved with a number of individual courses and this case study attempts to sum up one aspect of these : the cost of actually producing your own learning materials.

The figures reflect the various elements that go into materials development and would need to be borne in mind whenever a similar undertaking is envisaged.

The figures are an approximate amalgamation of two or three courses developing materials to 'O' grade and 'H' level.

The sums listed reflect the cost of developing approximately 60 - 80 hours of student learning material.

I would particularly like to thank Lyn Tett for commenting in detail on early drafts of this paper.

The Table of Figures

Overleaf is a listing of the costs involved in developing an 'O' grade or equivalent course. Each cost element is divided into costs which were actually paid and others which were absorbed or were never charged. Each of the ten items listed is annotated below. The balance between charged and uncharged costs may alter depending on your own scheme and circumstances, but the total ought to reflect the true cost.

1. Research and Pre-writing costs

   This could include buying in other materials to assess their suitability; paying for an assessment of materials and generally making sure there is no real alternative to developing a course from scratch. This phase is often missed out and this can be a false economy. It nearly always makes sense to buy in and adapt existing material or develop a study guide to a text book rather than start a course from scratch.

2. Writing Unit

   In the instance cited, I have imagined a situation where writers were paid something for materials production whilst other costs were simply absorbed. It still only represents a ratio of under 4 writing hours to 1 student hour. The average ratio is closer to 9:1. This would suggest other preparatory work, such as the development of handouts which had been previously undertaken was used by the writers to save writing time. Often speedy production of material depends upon a writer's in depth experience of the course in question. This figure can by much larger than I have indicated here.

   The hypothetical course in question comprises of 15 Units of 15 - 25 pages each.

3. Course Design

   There are three distinct stages here : the pre-writing house-style agreement; the structuring during the writing stage and finally putting the Units together during and after piloting. The actual cost reflects minimal graphic design for say a cover, but the unseen cost represents the time of staff involved in making these fundamental decisions. The ratio of time spent between the three elements is more or less equal.

4. Secretarial and Administration

   This covers the basic drafting of the Units and the general process of keeping track of the writing in progress. Some of these costs might be real in terms of staff overtime payments or buying in part-time support but often they are unseen costs reflected in full-time staff hours.

5. Layout and Typesetting

   Even if layout is done with scissors and paste and typesetting is simple copy typing with a golf-ball machine, this is a slow time consuming process. The costs here reflect both time spent word processing Units outwith the institution and internal staff time. The ratio of paid to unpaid might change but the total will remain the same.

4.

6. Pilot

This is in itself, a small cost element but vital for testing the materials. It need only involve a handful of students reporting back on the material. Changes needed at this stage will always increase secretarial and layout costs.

7. Proofing

This is a laborious task which is often handed out to external helpers at a small cost to the institution. Skimped, it makes the final course appear careless and messy. It is often left to the writers themselves and this can cause problems.

A 'fresh' eye always proof reads better than one familiar with the text. This stage should not be used for re-designing the material. All major decisions about layout and style should have been taken at stages 2 and 3.

8. Print and Production

This cost can be enormous depending on the kind of finished product you require. Simple layout, photocopied and stapled can be relatively inexpensive, litho printing of more than one colour is horrendously expensive. It will be very difficult to bring the Unit cost of a 15 page unit down to less than 50p - 75p.

Choice of binding can increase cost significantly, stiff covers for Units might also be an unnecessary luxury.

9. Miscellaneous Expenses

Copyright permission has been included here, together with the largely uncharged cost of producing a student's and tutor's handbook. If at all possible it is sensible to refer students to texts rather than reproducing material. It can be time consuming and frustrating trying to locate a copyright holder and seek permission to make copies. If this is pursued permission is nearly always granted for the payment of a small fee. But this will always be for a specified, limited number of copies. Failure to seek copyright clearance could involve, the individual, the institution and the local authority in legal proceedings.

10. Training

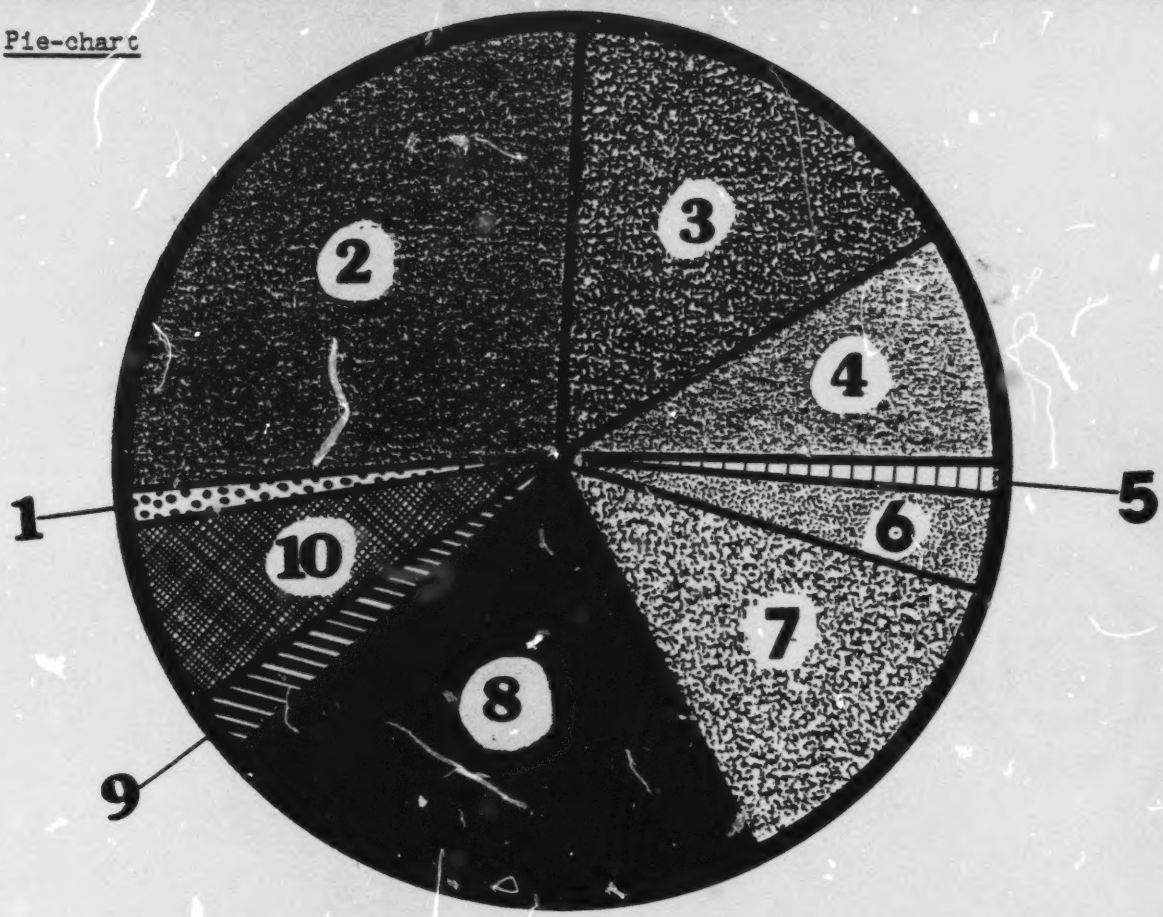
This includes a training session for staff on how to write interactive learning material, and a follow-up session mid-way through the writing. This was not charged, but staff might need to travel to the session or be paid for attendance.

DESCRIPTION	ACTUAL CASH PAID OUT	UNSEEN : COST ABSORBED OR NOT CHARGED
1. RESEARCH AND PRE-WRITING COSTS	50	20
2. WRITING UNITS	540	1000
3. COURSE DESIGN - PRE DURING PILOT	20	848
4. SECRETARIAL AND ADMIN.	157	332
5 PILOT		50
6. PROOFING	65	140
7. LAYOUT AND TYPESETTING	430	308
8. PRINT AND PRODUCTION	1180	25
9. MISCELLANEOUS EXPENSES - COPYRIGHT STUDENT & TUTOR HANDBOOK	60	100
10. TRAINING	200	200
TOTAL	2702	3023

TOTAL COSTS :

	Cost elements as a percentage of the whole.
1. 70	1.23%
2. 1540	26.99%
3. 868	15.20%
4. 489	8.57%
5. 738	12.93%
6. 50	0.88%
7. 205	3.59%
8. 1205	21.15%
9. 160	2.45%
10. 400	7.01%
5725	100%

Pie-chart



EACH COST HEADING AS A FRACTION OF THE WHOLE

HEADINGS

1. Research and pre-writing costs
2. Writing Units
3. Course design - Pre
   During
   Pilot
4. Secretarial and Admin.
5. Pilot
6. Proofing
7. Layout and typesetting
8. Print and Production
9. Miscellaneous Expenses - Copyright
   Student & Tutor Handbook
10. Training

7.

General Points which Emerge

1. The unseen costs are vastly more than the cash paid out. Often this proportion is much higher. Unseen costs are not non-existant costs and are reflected most obviously in staff time. Inadequate allowances of staff time will cause a log jam at some point in the system which can destroy the production schedule.

2. The writing cost is actually a low proportion of the total cost. It also shows the time allocated to the writers in these cases was inadequate.

3. Any technical subject requiring graphs, drawings and calculations dramatically increases

   a) design costs
   b) graphics costs
   c) layout costs
   d) proof reading costs
   e) typing time.

4. Many courses use a fair proportion of consultant's time for advice and training. This is uncharged.

5. It is better to define your production scheme before you go to print. Some research as to the costs of various kinds of production can save a considerable amount of money. Last minute decisions at this stage can be inefficient and costly.

6. Any tutor's handbook and a student handbook are additional costs and must be borne in mind. It should be clear that these form an integral part of the course and should be inserted at the design and planning stage. Time will have to be allocated accordingly.

7. The entire costing operation obviously relies on a tremendous amount of 'free' goodwill. This is reflected in underaccounted writer's time, secretarial support beyond the call of duty, under or uncharged external help.

8. There will be some training necessary to help the writers produce good, interactive learning material. This must be allowed for in the timing of materials' writing.

9. The cost of writing and printing add up to only 48% of the total.

Recommendations

The figures listed above and the points appended to them suggest a number of recommendations or points to be borne in mind when the decision to develop materials is taken.

1. As much costing as possible should be undertaken at the pre-writing stage, especially as regards final printing and production.

2. Thorough research before writing about what is and is not suitable material can save time.

3. The production of a Study Guide to a specific text book is far more cost efficient than producing self-contained units.

4. The amount of referral for students outwith the package needs to be contained, but supplementary texts of copyright material can take time to assemble.

5. Laborious tasks such as proof reading and post piloting material adjustment can be time consuming and must be allowed for.

6. Whenever possible new technology (such as word processing linked to computer photo-setting equipment) can save a considerable amount of time.

7. In the case of highly technical subjects, in spite of 6 above, the word processor cannot cope with technical signs and layout. Columns of figures appear very difficult to handle. A typewriter can often be quicker and more effective.

8. Know the limitations of your hardware.

9. Keep one person in overall control vis à vis design, layout, standard formatting and give him or her ultimate editing authority.

10. Do not underestimate costs. Even if services are free, meeting time, briefing time are expensive in terms of travel expenses and hours work. Free services all have hidden costs.

11. Increasing your print run lowers unit cost but decreases flexible use of material or modification of material.

12. Know the expectations of your target student group before you embark on material production.

13. Decide upon and cost the final production and layout of your materials at an early stage. If you can use in-house facilities, do. This may limit the overall design of the material, but it will be cheaper than outside printing.

14. Make all writers aware of the developing 'house style' as early as possible.

Conclusion

Even if the figures chosen are hypothetical, they give a clear indication of the pattern of costing. Some have been chosen to illustrate specific points, others reflect general trends.

True costs are reached by totalling the two columns, but in practice few costs are paid in full. Any particular materials development project combines money paid out with absorbed costs. A decision on whether to proceed needs to be taken bearing in mind both kinds of cost rather than how much can be hidden away.

The uncharged costs are largely reflected in staff time. These hours will be absorbed by a whole range of staff including the material writers. Adequate time must be given to all staff involved in order for the operation to proceed smoothly from stage to stage.